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WISCONSIN ECONOMIC INDICATORS

OCTOBER 1988

DILHR
DEPARTMENT OF
INDUSTRY, LABOR & HUMAN RELATIONS

WISCONSIN DATA AND SOURCES

	INDICATOR	SOURCE
L1	Composite Index of Leading Indicators	Wis.Dept. of Industry, Labor and Human Relations
L2	Average Work Week, Manufacturing	Wis. Dept. of Industry, Labor and Human Relations
L3	Average Overtime Hours, Mfg.	Wis. Dept. of Industry, Labor and Human Relations
L4	Average Weekly Initial Claims	Wis. Dept. of Industry, Labor and Human Relations
L5	Total Job Openings Received	Wis. Dept. of Industry, Labor and Human Relations
L6	New Business Incorporations	Wisconsin Secretary of State
L7	Net Gain in Business Phone Access Lines	Wis. Telephone Co. and General Telephone Co.
L8	Building Plans Examined	Wis. Dept. of Industry, Labor and Human Relations
C1	Help-Wanted Advertising Index (Milw.)	National Industrial Conference Board
C2	Total Unemployment Rate	Wis. Dept. of Industry, Labor and Human Relations
C3	Natural Gas Sales	Wisconsin Public Service Commission
C4	New Car Registrations	Wis. Department of Transportation
C5	Electric Power Sales	Wisconsin Public Service Commission
C6	Total Securities Registrations	Wisconsin Commissioner of Securities
C7	Manufacturing Employment	Wis. Dept. of Industry, Labor and Human Relations
C8	Average Weekly Earnings, Mfg.	Wis. Dept. of Industry, Labor and Human Relations
C9	Cash Receipts From Farm Marketing	U.S. Department of Agriculture
C10	Contract Construction Employment	Wis. Dept. of Industry, Labor and Human Relations
X1	Birth Registrations	Wis. Department of Health and Social Services
X2	Death Registgrations	Wis. Department of Health and Social Services
X3	Natural Net Gain in Population	Wis. Department of Health and Social Services
X4	Marriage Registrations	Wis. Department of Health and Social Services
X5	Consumer Price Index (Milwaukee)	U.S. Bureau of Labor Statistics
X6	Index of Prices Received By Farmers	Wisconsin Department of Agriculture
X7	Net Gain in Residential Phone Access Lines	Wis. Telephone Co. and General Telephone Co.
X8	Labor Disputes, No. of Workers	Wis. Dept. of Industry, Labor and Human Relations
X9	Unemployment Compensation Exhaustees	Wis. Dept. of Industry, Labor and Human Relations

NOTES: Selected series are seasonally adjusted by the Bureau of the Census X-11 Variant of the Census Method II Seasonal Adjustment Program. The adjusted data are plotted on arithmetic scales.

SECTION A is a summary of recent data and current changes for all indicators and is presented in chart form. The indicators are presented with cyclical timing as the principle basis of classification.

SECTION B is a summary of Wisconsin Labor Force Estimates, including Employment, Unemployment and Unemployment Rates, and selected U.S. data.

SECTION C analyzes the Wisconsin labor force by industry and by specified Standard Metropolitan Statistical Areas.

SECTION D singles out certain economic time series as being leading or coinciding in relation to movements in aggregate economic activity. They are seasonally adjusted and presented graphically. The indicators are grouped by cyclical timing.

COVER PHOTO: Courtesy of Wisconsin Division of Tourism Development

WISCONSIN ECONOMIC INDICATORS

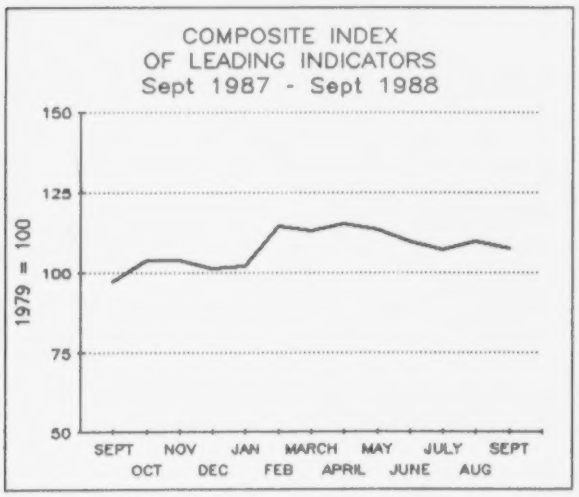
SUMMARY FOR SEPTEMBER

COMPOSITE INDEX

The Composite Index of Wisconsin's leading economic indicators decreased in September by 1.9 percentage points.

The index has exhibited an up and down, saw-tooth pattern during the last four months. However, September's index is still well above the 100 base and is the highest September value on record.

A large decrease in job openings received contributed heavily to the index decline. Longer workweeks in manufacturing and fewer initial unemployment compensation claims softened the index decrease.



LEADING INDICATORS

The average workweek in Wisconsin's manufacturing industries increased by six-tenths of an hour. The workweek average usually remains unchanged in September, so this month's growth is well above the normal seasonal pattern.

An increase in the average weekly overtime hours spent in manufacturing jobs helped lengthen the total workweek. The overtime average grew by three-tenths of an hour, a large increase for September.

While the manufacturing employment level in September decreased, as normal, the longer workweek means sustained manufacturing activity. Total labor input into manufacturing increased slightly.

The average number of weekly initial claims for unemployment compensation decreased by nearly twelve-hundred in September. A slight increase is normal for that month. Total employment growth of over fourteen thousand and labor force growth of half that, seven thousand, helped keep initial claims down.

Despite employment growth, the number of job openings received by Job Service offices throughout the state decreased in September. Some, but only a small portion of the decrease is a normal seasonal trend. Labor force growth very likely provided employers an expanded pool of job seekers.

The number of monthly new business incorporations decreased in September when an increase is the seasonal norm. The new incorporations number, however, was unusually large one month ago.

The net gain in business telephone access lines increased by 347 in September. An increase of over five hundred would have been par. The access line number is the net of primary access telephone line installations minus removals, and excludes extensions. Thus, growth indicates an increase in the number of business sites.

Section

A WISCONSIN ECONOMIC INDICATORS

INDICATOR	UNIT	MONTHLY SERIES			% CHANGE		AVG.
		Latest Month	Mo. Ago	Yr. Ago	Mo/Ago	Yr/Ago	1987
LEADING INDICATORS							
L1 COMPOSITE INDEX OF LEADING INDICATORS							
Seasonally Adjusted	Index	SEPT 107.4	109.3	97.1	-1.7%	10.6%	97.9
L2 AVG. WORK WEEK, MFG.							
Unadjusted	Hours	SEPT 41.9	41.3	41.3	1.5%	1.5%	41.4
Seasonally Adjusted		41.9	41.3	41.2	1.5%	1.7%	
L3 AVG. OVERTIME HOURS, MFG.							
Unadjusted	Hours	SEPT 4.5	4.2	4.4	7.1%	2.3%	3.9
Seasonally Adjusted		4.0	3.8	3.9	5.3%	2.6%	
L4 AVG. WEEKLY INITIAL CLAIMS							
Unadjusted	Number	SEPT 3975	5163	4352	-23.0%	-8.7%	7601
Seasonally Adjusted		5933	7365	6494	-19.4%	-8.6%	
L5 TOTAL JOB OPENINGS RECEIVED							
Unadjusted	Number	SEPT 9626	12194	9993	-21.1%	-3.7%	7774
Seasonally Adjusted		7433	9579	7718	-22.4%	-3.7%	
L6 NEW BUSINESS INCORPORATIONS							
Unadjusted	Number	SEPT 521	587	532	-11.2%	-2.1%	546
Seasonally Adjusted		554	644	566	-14.0%	-2.1%	
L7 NET GAIN IN BUSINESS TELEPHONE ACCESS LINES							
Unadjusted	Number	SEPT 2668	2321	3731	15.0%	-28.5%	1921
Seasonally Adjusted		2214	2396	1519	-7.6%	45.8%	
L8 BUILDING PLANS EXAMINED							
Unadjusted	Number	SEPT 685	774	601	-11.5%	14.0%	622
Seasonally Adjusted		639	694	561	-7.9%	13.9%	
COINCIDING INDICATORS							
C1 HELP-WANTED INDEX (MILW.)							
Seasonally Adjusted	Index	AUG 93	84	82	10.7%	13.4%	78
C2 UNEMPLOYMENT RATE, TOTAL							
Unadjusted	Percent	SEPT 3.4	3.7	4.5	.....	.....	6.1
Seasonally Adjusted		4.2	4.3	5.6	.....	.....	
C3 NATURAL GAS SALES							
Unadjusted	Mil.	AUG 60.9	53.0	58.6	14.9%	3.9%	169.0
Seasonally Adjusted	Therms	141.3	127.7	135.8	10.6%	4.1%	
C4 NEW CAR REGISTRATIONS							
Unadjusted	Number	SEPT 14,074	18,834	16,505	-25.3%	-14.7%	14,261
Seasonally Adjusted		11,298	18,389	13,245	-38.6%	-14.7%	
C5 ELECTRIC POWER SALES							
Unadjusted	Mil. KWH	AUG 2710.8	2567.2	2216.6	5.6%	22.3%	2068.8
Seasonally Adjusted		2550.1	2381.4	2084.8	7.1%	22.3%	
C6 TOTAL SECURITIES REGISTRATIONS							
Unadjusted	Mil. Dol.	SEPT 169.1	145.6	98.1	16.1%	72.4%	120.4
Seasonally Adjusted		185.2	143.6	107.5	29.0%	72.3%	

Section

A WISCONSIN ECONOMIC INDICATORS

INDICATOR	UNIT	MONTHLY SERIES			% CHANGE		AVG.
		Latest Month	Mo. Ago	Yr. Ago	Mo/Ago	Yr/Ago	1987
C7 MANUFACTURING EMPLOYMENT							
Unadjusted	Thous.	SEPT 559.0	562.6	542.7	-0.6%	3.0%	526.8
Seasonally Adjusted		547.0	547.3	530.8	-0.1%	3.1%	
C8 AVG. WEEKLY EARNINGS, MFG.							
Unadjusted	Dollars	SEPT $442.88	$429.52	$436.13	3.1%	1.5%	$436.88
Seasonally Adjusted		$447.81	$440.99	$440.81	1.5%	1.6%	
C9 CASH RECEIPTS FROM FARM MKTG.							
Unadjusted	Mil. Dol.	JULY 411.4	397.0	416.8	3.6%	-1.3%	433.1
Seasonally Adjusted		413.1	415.3	418.5	-0.5%	-1.3%	
C10 CONTRACT CONSTRUCTION EMPL.							
Unadjusted	Thous.	SEPT 77.4	77.4	72.8	0.0%	6.3%	67.4
Seasonally Adjusted		69.0	67.8	64.9	1.8%	6.3%	
OTHER KEY INDICATORS							
X1 BIRTH REGISTRATIONS							
Unadjusted	Number	SEPT 5846	6794	6223	-14.0%	-6.1%	5892
Seasonally Adjusted		5448	6733	5802	-19.1%	-6.1%	
X2 DEATH REGISTRATIONS							
Unadjusted	Number	SEPT 3211	3740	3337	-14.1%	-3.8%	3528
Seasonally Adjusted		3303	4105	3434	-19.5%	-3.8%	
X3 NATURAL NET GAIN POPULATION							
Unadjusted	Number	SEPT 2635	3054	2886	-13.7%	-8.7%	2364
Seasonally Adjusted		2134	2703	2337	-21.1%	-8.7%	
X4 MARRIAGE REGISTRATIONS							
Unadjusted	Number	SEPT 4997	5157	4501	-3.1%	11.0%	3173
Seasonally Adjusted		3358	3466	3025	-3.1%	11.0%	
X5 CONSUMER PRICE INDEX			(Dec '87)	(Jun '87)			
Unadjusted	Index	JUNE 353.7	349.2	340.0	1.3%	4.0%	344.6
X6 PRICES RECEIVED BY FARMERS							
Unadjusted	Index	AUG 134	130	135	3.1%	-0.7%	134
Seasonally Adjusted		135	133	136	1.5%	-0.7%	
X7 NET GAIN IN RESIDENTIAL TELEPHONE ACCESS LINES							
Unadjusted	Number	SEPT 7740	3522	7804	119.8%	-0.8%	1750
Seasonally Adjusted		2496	2258	1917	10.5%	30.2%	
X8 LABOR DISPUTES, NO. OF WORKERS							
Unadjusted	Number	SEPT 511	149	359	243.0%	42.3%	538
Seasonally Adjusted		273	50	192	446.0%	42.2%	
X9 UNEMPLOYMENT COMPENSATION EXHAUSTEES							
Unadjusted	Number	SEPT 12,660	13,691	15,911	-7.5%	-20.4%	18560
Seasonally Adjusted		12,801	13,266	16,086	-3.5%	-20.4%	

Section

B LABOR FORCE ESTIMATES

WISCONSIN LABOR FORCE ESTIMATES SEPTEMBER	(In Thousands)			% CHANGE	
	Latest Mo.	Mo. Ago	Yr. Ago	Mo/Ago	Yr/Ago
Unadjusted					
CIVILIAN LABOR FORCE	2592.4	2585.1	2493.8	0.3%	4.0%
Employment (incl. Labor Disputes)	2504.3	2490.1	2380.6	0.6%	5.2%
Unemployment	88.1	95	113.2	-7.3%	-22.2%
Unemployment Rate	3.4	3.7	4.5	.....	.....
Seasonally Adjusted					
CIVILIAN LABOR FORCE	2562.0	2555.5	2471.9	0.3%	3.6%
Employment (incl. Labor Disputes)	2455.2	2446.1	2334.7	0.4%	5.2%
Unemployment	106.8	109.4	137.2	-2.4%	-22.2%
Unemployment Rate	4.2	4.3	5.6	.....	.....

WISCONSIN EMPLOYMENT ESTIMATES SEPTEMBER	(In Thousands)			% CHANGE	
	Latest Mo.	Mo. Ago	Yr. Ago	Mo/Ago	Yr/Ago
Unadjusted					
TOTAL NONFARM WAGE AND SALARY WORKERS	2185.4	2164.8	2116.2	1.0%	3.3%
Manufacturing	558.5	562.5	542.3	-0.7%	3.0%
Mining	2.5	2.5	2.4	0.0%	4.2%
Contract Construction	77.4	77.4	72.8	0.0%	6.3%
Transportation and Public Utilities	100.6	95.7	96.3	5.1%	4.5%
Electric, Gas and Sanitary Services	17.4	17.7	17.6	-1.7%	-1.1%
Wholesale Trade	110.9	112.0	107.7	-1.0%	3.0%
Retail Trade	413.6	414.9	400.2	-0.3%	3.3%
General Merchandise	49.1	48.9	48.2	0.4%	1.9%
Finance, Insurance and Real Estate	115.2	115.8	113.1	-0.5%	1.9%
Banking	28.1	28.4	27.9	-1.1%	0.7%
Insurance	38.7	38.8	38.1	-0.3%	1.6%
Service and Miscellaneous	473.7	477.0	462.8	-0.7%	2.4%
Hospitals	71.3	71.8	69.3	-0.7%	2.9%
Private Education	23.7	22.4	24.7	5.8%	-4.0%
Government	333.0	307.0	318.8	8.5%	4.5%
State Government	88.0	77.6	79.3	13.4%	11.0%
Local Government	216.3	200.4	211.0	7.9%	2.5%

UNITED STATES LABOR FORCE ESTIMATES SEPTEMBER	(In Thousands)			% CHANGE	
	Latest Mo.	Mo. Ago	Yr. Ago	Mo/Ago	Yr/Ago
Seasonally Adjusted					
CIVILIAN LABOR FORCE	121,924	122,031	119,963	-0.1%	1.6%
Employment (incl. Labor Disputes)	115,328	115,180	112,872	0.1%	2.2%
Unemployment	6,596	6,851	7,091	-3.7%	-7.0%
Unemployment Rate	5.4%	5.6%	5.9%	.....	.....

WISCONSIN ECONOMIC INDICATORS

MANUFACTURING EMPLOYMENT Unadjusted SEPTEMBER	(In Thousands)			% CHANGE	
	Latest Mo.	Mo. Ago	Yr. Ago	Mo/Ago	Yr/Ago
All Manufacturing (Incl. Canning)	558.5	562.5	542.3	-0.7%	3.0%
All Manufacturing (Excl. Canning)	542.7	544.0	523.8	-0.2%	3.6%
Durable Goods	343.1	341.7	328.3	0.4%	4.5%
Lumber and Wood Products (Excl. Furniture)	28.4	29.5	27.5	-3.7%	3.3%
Furniture and Fixtures	11.7	11.7	10.6	0.0%	10.4%
Stone, Clay, and Glass Products	10.0	10.2	9.7	-2.0%	3.1%
Primary Metal Industries	22.7	22.4	20.5	1.3%	10.7%
Iron and Steel Foundries	11.8	11.7	10.3	0.9%	14.6%
Fabricated Metal Products	57.6	57.9	54.4	-0.5%	5.9%
Fabricated Structural Metal Products	14.5	14.4	13.1	0.7%	10.7%
Metal Stampings	11.1	11.5	11.2	-3.5%	-0.9%
Machinery (Excl. Electrical)	110.7	110.3	102.9	0.4%	7.6%
Engines and Turbines	20.1	20.1	19.4	0.0%	3.6%
Farm Machinery and Equipment	13.3	13.3	12.6	0.0%	5.6%
Constr.,Mining, Material Handling Machinery	11.5	11.2	10.5	2.7%	9.5%
Metalworking Machinery and Equipment	12.1	11.8	11.3	2.5%	7.1%
Special Ind. Mach., Excl. Metalworking	14.6	14.5	13.1	0.7%	11.5%
Gen. Industrial Mach. and Equip.	15.5	15.6	14.1	-0.6%	9.9%
Electrical Machinery, Equip. and Supplies	47.9	47.9	46.8	0.0%	2.4%
Electrical Industrial Apparatus	15.5	15.5	15.1	0.0%	2.6%
Transportation Equipment	31.5	29.2	34.4	7.9%	-8.4%
Motor Vehicles and Equipment	25.5	23.0	27.7	10.9%	-7.9%
Instrument and Related Products	12.4	12.4	11.9	0.0%	4.2%
Miscellaneous Manufacturing	10.2	10.2	9.6	0.0%	6.2%
Nondurable Goods	215.4	220.8	214.0	-2.4%	0.7%
Food and Kindred Products	67.7	70.8	69.6	-4.4%	-2.7%
Meat Products	15.2	15.3	15.1	-0.7%	0.7%
Dairy Products	18.1	18.4	17.4	-1.6%	4.0%
Canning and Preserving	15.7	18.3	18.5	-14.2%	-15.1%
Bakery Products	4.4	4.4	4.3	0.0%	2.3%
Beverage Industries	7.3	7.5	7.3	-2.7%	0.0%
Textile Mill Products	4.8	5.0	4.7	-4.0%	2.1%
Apparel and Other Finished Products	7.5	7.2	6.8	4.2%	10.3%
Paper and Allied Products	47.8	49.8	48.3	-4.0%	-1.0%
Pulp and Paper Mills	29.0	30.4	29.2	-4.6%	-0.7%
Printing, Publishing and Allied Products	44.8	44.8	41.9	0.0%	6.9%
Chemicals and Allied Products	10.4	10.6	10.5	-1.9%	-1.0%
Rubber and Misc. Plastics Products	25.2	25.4	25.1	-0.8%	0.4%
Miscellaneous Plastics Products	21.1	21.3	20.9	-0.9%	1.0%
Leather and Leather Products	7.0	7.0	6.9	0.0%	1.4%

Section C

WISCONSIN EARNINGS AND HOURS DATA

EARNINGS AND HOURS Unadjusted SEPTEMBER	Average Weekly Earnings			Average Weekly Hours		
	Latest Mo.	Mo. Ago	Yr. Ago	Latest Mo.	Mo. Ago	Yr. Ago
All Manufacturing (Incl. Canning)	$442.88	$429.52	$436.13	41.9	41.3	41.3
All Manufacturing (Excl. Canning)	449.21	434.02	443.98	42.1	41.1	41.3
Durable Goods	447.91	434.84	439.93	41.9	41.1	41.0
Lumber and Wood Products (Excl. Furniture)	330.03	322.79	314.42	41.1	40.5	39.5
Furniture and Fixtures	362.03	360.36	343.12	43.0	44.0	42.1
Stone, Clay, and Glass Products	440.72	432.45	432.90	46.1	45.0	44.4
Primary Metal Industries	464.58	443.27	443.56	44.5	43.5	43.7
Iron and Steel Foundries	479.67	452.90	447.43	46.3	45.2	44.3
Fabricated Metal Products	421.64	414.92	423.32	41.5	41.0	40.9
Fabricated Structural Metal Products	439.46	429.68	430.84	44.3	43.8	43.3
Metal Stampings	463.14	457.60	445.04	41.8	41.6	39.7
Machinery (Excl. Electrical)	490.36	474.29	484.88	42.2	41.1	41.8
Engines and Turbines	509.04	480.15	522.12	39.8	37.6	40.6
Farm Machinery and Equipment	542.38	514.08	520.33	43.6	42.0	42.2
Constr.,Mining, Material Handling Machinery	497.80	503.42	481.25	43.4	43.7	43.2
Metalworking Machinery and Equipment	548.92	532.79	530.19	44.7	43.6	43.0
Special Ind. Mach., Excl. Metalworking	486.30	497.34	487.06	41.6	42.8	41.7
Gen. Industrial Mach. and Equip.	463.94	458.43	464.39	42.1	41.6	40.7
Electrical Machinery, Equip. and Supplies	416.16	405.27	406.53	40.8	39.5	39.7
Electrical Industrial Apparatus	432.19	437.13	446.63	41.2	40.4	40.9
Transportation Equipment	598.01	584.40	573.27	41.1	40.0	39.4
Instrument and Related Products	394.80	380.79	373.35	42.0	41.3	41.3
Nondurable Goods	433.47	422.42	429.93	41.8	41.7	41.7
Food and Kindred Products	383.80	386.75	370.39	40.4	42.5	41.2
Meat Products	381.31	354.38	377.73	42.7	40.5	41.6
Dairy Products	412.93	401.71	423.36	41.5	40.7	42.0
Textile Mill Products	282.49	280.44	283.50	41.0	41.0	40.5
Apparel and Other Finished Products	275.94	261.02	249.00	42.0	38.9	37.5
Paper and Allied Products	615.79	584.95	623.30	46.3	45.1	46.9
Pulp and Paper Mills	671.11	637.56	686.34	46.8	46.0	48.3
Printing, Publishing and Allied Products	438.45	418.81	454.73	39.5	38.6	39.1
Chemicals and Allied Products	390.85	394.72	402.50	37.8	38.1	37.2
Rubber and Misc. Plastics Products	358.28	345.54	336.15	42.3	40.7	40.5
Leather and Leather Products	244.32	237.11	256.35	37.3	36.2	38.9

AVERAGE HOURLY EARNINGS Unadjusted SEPTEMBER	Including Overtime			Excluding Overtime		
	Latest Mo.	Mo. Ago	Yr. Ago	Latest Mo.	Mo. Ago	Yr. Ago
All Manufacturing (Incl. Canning)	$10.57	$10.40	$10.56	$10.03	$9.90	$10.02
All Manufacturing (Excl. Canning)	10.67	10.56	10.75	10.13	10.08	10.18
Durable Goods	10.69	10.58	10.73	10.19	10.12	10.29
Lumber and Wood Products (Excl. Furniture)	8.03	7.97	7.96	7.72	7.68	7.89
Furniture and Fixtures	8.42	8.19	8.15	8.04	7.86	7.96
Stone, Clay, and Glass Products	9.56	9.61	9.75	8.89	8.95	9.40
Primary Metal Industries	10.44	10.19	10.15	9.75	9.58	9.58
Iron and Steel Foundries	10.36	10.02	10.10	9.57	9.36	9.52
Fabricated Metal Products	10.16	10.12	10.35	9.74	9.74	9.89
Fabricated Structural Metal Products	9.92	9.81	9.95	9.35	9.32	9.42
Metal Stampings	11.08	11.00	11.21	10.60	10.56	10.84
Machinery (Excl. Electrical)	11.62	11.54	11.60	11.02	11.01	11.13
Engines and Turbines	12.79	12.77	12.86	12.11	12.20	12.38
Farm Machinery and Equipment	12.44	12.24	12.33	11.75	11.78	11.84
Constr.,Mining, Material Handling Machinery	11.47	11.52	11.14	10.98	11.06	10.64
Metalworking Machinery and Equipment	12.28	12.22	12.33	11.65	11.59	11.68
Special Ind. Mach., Excl. Metalworking	11.69	11.62	11.68	11.10	11.05	11.19
Gen. Industrial Mach. and Equip.	11.02	11.02	11.41	10.44	10.49	10.91
Electrical Machinery, Equip. and Supplies	10.20	10.26	10.24	9.73	9.87	9.83
Electrical Industrial Apparatus	10.49	10.82	10.92	10.03	10.38	10.71
Transportation Equipment	14.55	14.61	14.55	14.00	13.82	13.78
Instrument and Related Products	9.40	9.22	9.04	9.09	8.91	8.76
Nondurable Goods	10.37	10.13	10.31	9.77	9.56	9.60
Food and Kindred Products	9.50	9.10	8.99	8.88	8.45	8.58
Meat Products	8.93	8.75	9.08	8.47	8.36	8.76
Dairy Products	9.95	9.87	10.08	9.34	9.34	9.44
Textile Mill Products	6.89	6.84	7.00	6.64	6.60	6.74
Apparel and Other Finished Products	6.57	6.71	6.64	6.36	6.48	6.40
Paper and Allied Products	13.30	12.97	13.29	12.44	12.23	12.08
Pulp and Paper Mills	14.34	13.86	14.21	13.36	13.03	12.84
Printing, Publishing and Allied Products	11.10	10.85	11.63	N.A.	N.A.	N.A.
Chemicals and Allied Products	10.34	10.36	10.82	9.99	9.97	10.55
Rubber and Misc. Plastics Products	8.47	8.49	8.30	8.09	8.17	7.97
Leather and Leather Products	6.55	6.55	6.59	6.37	6.41	6.39

Section

C

SUMMARY OF RECENT WISCONSIN DATA

EARNINGS AND HOURS, MFG. Production Workers (Unadjusted) SEPTEMBER	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS				
							INCL. OVERTIME			EXCL. OVERTIME	
	Latest Month	Month Ago	Year Ago	Latest Month	Month Ago	Year Ago	Latest Month	Month Ago	Year Ago	Latest Month	Month Ago
United States	$425.18	$413.91	$407.59	41.4	40.9	40.8	$10.27	$10.12	$9.99	.....	.....
Wisconsin	442.88	429.52	436.13	41.9	41.3	41.3	10.57	10.40	10.56	10.03	9.90
Appleton-Oshkosh (Calumet-Winnebago-Outagamie)	482.89	466.47	464.58	43.0	42.1	42.7	11.23	11.08	10.88	10.62	10.56
Beloit (City)	INA	INA	INA	INA	INA	INA	INA	INA	INA	INA	INA
Eau Claire (Eau Claire-Chippewa)	433.04	427.68	450.43	41.4	40.5	41.9	10.46	10.56	10.75	9.76	9.88
Fond du Lac (County)	INA	INA	INA	INA	INA	INA	INA	INA	INA	INA	INA
Green Bay (Brown County)	496.48	473.29	466.34	42.8	42.6	40.8	11.60	11.11	11.43	10.95	10.48
Janesville (City)	INA	INA	INA	INA	INA	INA	INA	INA	INA	INA	INA
Janesville-Beloit (Rock Co.)	493.25	485.36	435.37	40.2	39.3	36.1	12.27	12.37	12.06	11.75	11.61
Kenosha (County)	503.20	482.36	539.14	40.0	39.7	41.6	12.58	12.15	12.96	12.18	11.72
La Crosse (County)	364.83	351.23	363.37	40.9	39.2	39.8	8.92	8.96	9.13	8.62	8.71
Madison (Dane County)	436.36	425.64	406.02	44.3	43.3	41.6	9.85	9.83	9.76	9.33	9.39
Manitowoc (County)	INA	INA	INA	INA	INA	INA	INA	INA	INA	INA	INA
Milwaukee (Milwaukee-Ozaukee-Washington-Waukesha)	483.00	469.94	480.93	42.0	40.9	41.0	11.50	11.49	11.73	10.89	10.94
Racine (County)	431.83	418.26	436.00	39.8	38.8	39.6	10.85	10.78	11.01	10.31	10.30
Sheboygan (County)	INA	INA	INA	INA	INA	INA	INA	INA	INA	INA	INA
Wausau (Marathon County)	430.86	420.46	436.17	43.0	42.3	43.1	10.02	9.94	10.12	9.40	9.46

INA - Information Not Available due to budget reductions

MANUFACTURING EMPLOYMENT Unadjusted SEPTEMBER	(In Thousands)			% CHANGE	
	Latest Mo.	Mo. Ago	Yr. Ago	Mo/Ago	Yr/Ago
United States	19733.0	19661.0	19327.0	0.4%	2.1%
Wisconsin	558.5	562.5	542.3	-0.7%	3.0%
Appleton-Oshkosh (Calumet-Winnebago-Outagamie)	54.0	54.9	51.6	-1.6%	4.7%
Beloit (City)	INA	INA	INA		
Eau Claire (Eau Claire-Chippewa)	10.9	11.0	10.1	-0.9%	7.9%
Fond du Lac (County)	INA	INA	INA		
Green Bay (Brown County)	26.2	26.8	25.5	-2.2%	2.7%
Janesville (City)	INA	INA	INA		
Janesville-Beloit (Rock County)	18.2	18.1	17.5	0.6%	4.0%
Kenosha (County)	14.5	12.1	15.5	19.8%	-6.5%
La Crosse (County)	11.3	11.4	11.1	-0.9%	1.8%
Madison (Dane County)	23.8	24.3	23.1	-2.1%	3.0%
Manitowoc (County)	INA	INA	INA		
Milwaukee (Milwaukee-Ozaukee-Washington-Waukesha)	175.6	175.9	170.3	-0.2%	3.1%
Racine (County)	25.0	24.9	24.2	0.4%	3.3%
Sheboygan (County)	INA	INA	INA		
Wausau (Marathon County)	13.9	14.4	13.1	-3.5%	6.1%

NEW METHODS IN LABOR MARKET INFORMATION

...newer statistical techniques
were available which could
be used to improve the estimates...

By H. James Jackson

In January we will be using a new method to estimate Wisconsin total employment and the unemployment rate. All of the state labor force, employment, and unemployment estimates will be revised back to at least 1980. As with normal benchmarking, all local area unemployment estimates will be revised for at least the past two years.

How are employment and unemployment estimates made now?

The national estimates of employment and unemployment are obtained through a monthly household survey, called the Current Population Survey (CPS). This national survey contains samples drawn for each of the states. In eleven "direct use states" the sample is large enough to release monthly estimates directly from the sample survey.

There are three direct use states in this region: Illinois, Michigan, and Ohio. Random sampling errors create a problem even in these larger states. It can be very difficult to interpret the month-to-month changes when you know that in one month out of ten or twenty the random error will be quite large.

It would be expensive to increase the sample size to produce direct use estimates in every state, and the cost of a sample large enough to estimate total employment and unemployment in every county would be unthinkable.

Fortunately we do have other tools to help us estimate total employment and unemployment, and to interpret these estimates.

A monthly Current Employment Statistics (CES) employer survey provides information about nonfarm wage and salary employment, and what is happening to employment tells us something about unemployment. The CES is adjusted from the place of work to an estimate by place of residence using 1980 Census data. The Department of Agriculture's estimate of employment for the Lakes Region of Michigan, Minnesota and Wisconsin is used to estimate Wisconsin's agricultural employment by linking it to 1980 Census data. Regional self-employed and unpaid family data is used to estimate this component for Wisconsin.

This "handbook estimate" of employment reflects the month-to-month change better than could be obtained from the inadequate monthly CPS household survey sample; but, when averaged, the household survey gives a more accurate total employment level. To improve the estimate of the total number employed, this handbook estimate is multiplied by the ratio of the six-month moving average CPS household survey total employment estimate to the six-month moving average handbook estimate.

Unemployment compensation claims give us information about the experienced

job loser portion of unemployment, but first we have to subtract any claimants with earnings, add in an estimate for those who delay filing or never file a claim, and use final payments to estimate those who have exhausted their benefits. We use claimants as a percentage of insured employment to estimate unemployment related to uninsured industries. The estimate of new and reentrant unemployed is based upon national CPS household survey data as well as the proportions of youth and of adults in the population.

The resulting estimates provide a reasonable estimate of the changes between months, but this "handbook" estimate of the total number of unemployed varies among the states, depending upon the respective unemployment compensation laws and their administration. To insure comparability of the total unemployment estimates among the states, the estimates are benchmarked annually to the CPS household survey annual average estimate, and the monthly handbook unemployment estimate is adjusted to a state total by multiplying it by the ratio of the six-month moving average CPS survey unemployment estimate divided by the six-month moving average handbook estimate.

The estimates of employment and unemployment for metropolitan statistical areas and counties are developed using these same methods except that, instead of six-month moving average ratio to CPS household survey data, all substate estimates are adjusted so that the sum of the areas adds to the state total. Any improvement in the state total will also improve all of the substate estimates.

Why change to a new method?

One reason for the seven years of research by the Bureau of Labor Statistics to develop improved methods was that claimants were becoming a smaller portion of total job losers. The ratio between the six-month moving average CPS estimate of unemployment and the six-month moving average handbook estimate was becoming larger. This was altering the seasonal pattern of the estimates, and making it difficult to compare current estimates with those of a year ago.

A second reason for change was that newer CPS household survey data showed that the ratio of self-employed and unpaid family employment to nonfarm wage and salary employment changes. It is not good enough to base estimates upon ratios developed through research that becomes obsolete.

One reason that was particularly important to us in Wisconsin is that we use seasonal adjustment to examine the underlying trend-cycle of the employment and unemployment data. We were forced to use considerable judgement in interpreting the results because the seasonal adjustment factors were developed based upon benchmarked estimates that did not have the same seasonal pattern as the current numbers which used the six-month moving average ratios.

One reason that was particularly important to the Bureau of Labor Statistics was that newer statistical techniques were available which could be used to improve the estimates and to improve the status of the methodology among other statisticians.

What we would really like to have would be estimates that are like those from the CPS household sample used in the direct use states, but without the random sampling error. We would like estimates that more accurately represent out current seasonal changes, and more accurate comparisons of changes with last month and with a year ago.

What is the new method?

No new sources of information have been discovered, but the state estimates are being significantly improved through use of the latest statistical techniques. Two regression equations were developed for each state, one to estimate employment, and the other to estimate the unemployment rate. A regression equation is simply a mathematical expression of historical facts and the item you want to estimate.

In the equation used to estimate employment, the most important factor is the nonfarm wage and salary employment figure gathered from the CPS survey of employers. Other factors in the Wisconsin equation are total agricultural employment and self-employed, unpaid family, and private household employment from the CPS household survey.

The factors used in estimating the unemployment rate are unemployment insurance claims divided by nonfarm wage and salary employment, the CPS household survey employment to population ratio, and the CPS household survey division entrant rate.

One problem with earlier attempts by the Bureau to develop regression equations for Wisconsin is that these relationships changed over time. Past numbers could be forced to fit by introducing artificial adjustment factors in appropriate years, but we would never know until long after the fact if current estimates needed some kind of trend adjustment factor.

The newest statistical improvement is to add variable regression coefficients which allow for changing relationships over time. The variable coefficients discount old data as structural change takes place. The method has a built in self-correcting mechanism, the Kalman Filter, which prevents systematic divergence of the model from the CPS survey data.

Another problem with the current method is that adjusting to an annual average each year required some distortion in the seasonal pattern to avoid jumps in the level between years. The new regression method reduces this problem because very little adjustment is required and because a new statistical procedure, called the Denton Method, is used to minimize differences between the data that is adjusted to the annual average and the original seasonal estimates.

Is the new method better?

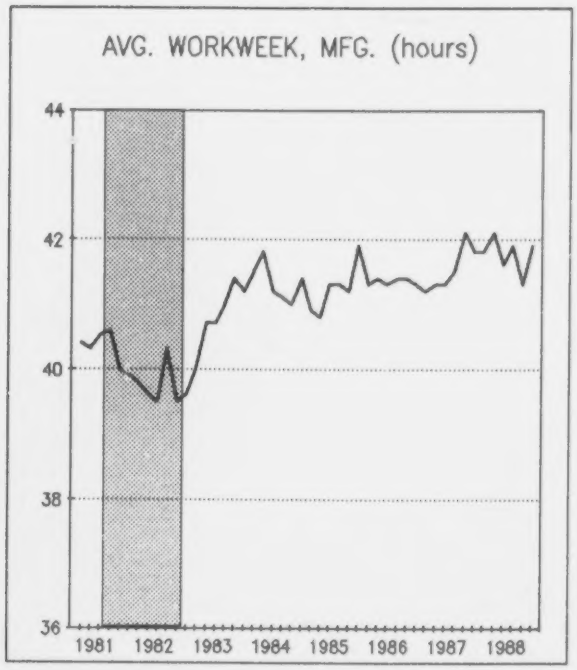
Statisticians in the Bureau of Labor Statistics were proud of the new methods they had developed, but were nervous about the reaction of analysts in the 49 cooperating states who would have to analyze this data. The results are still estimates...the various state economists would judge whether they are reasonable, and the state analysts would have to explain the numbers to the news media.

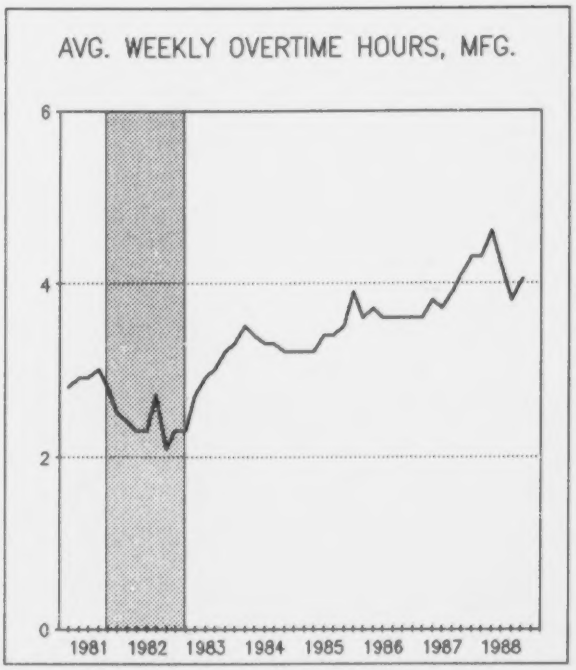
We expect that we will have one problem in Wisconsin. The geographic sample that is drawn by the Census is based upon household characteristics and not upon the industries that do the hiring. In Wisconsin the sample does not adequately represent the automobile industry. But, we will have this problem until the CPS sample design is improved, probably after the 1990 Census, no matter what estimating method we use.

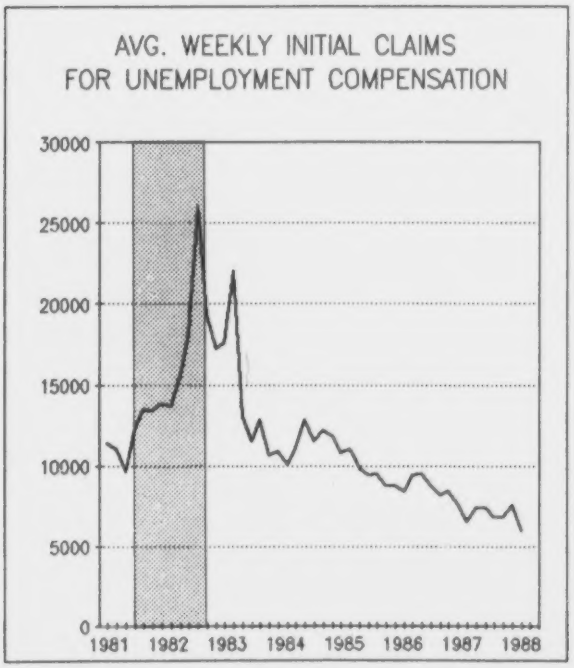
A committee of state labor market information directors worked with the Bureau of Labor Statistics in this cooperative program to insure that the results would meet practical state needs. Every state tested the individual regression equations that were developed for that state, and each

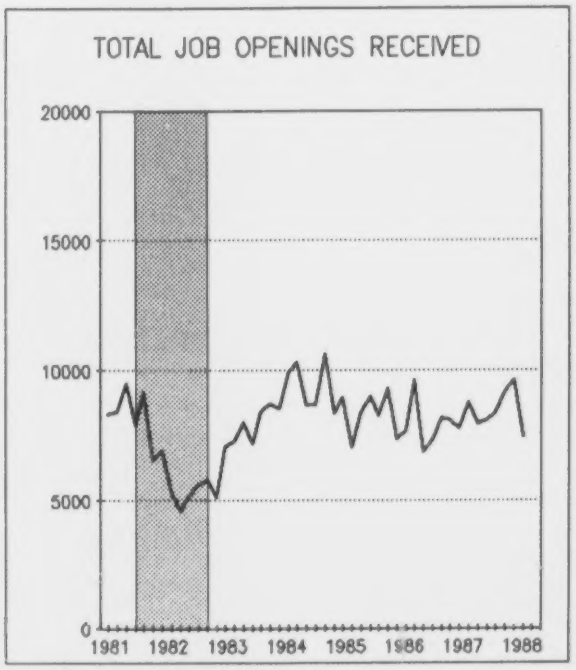
(Continued on back cover)

D CYCLICAL INDICATORS









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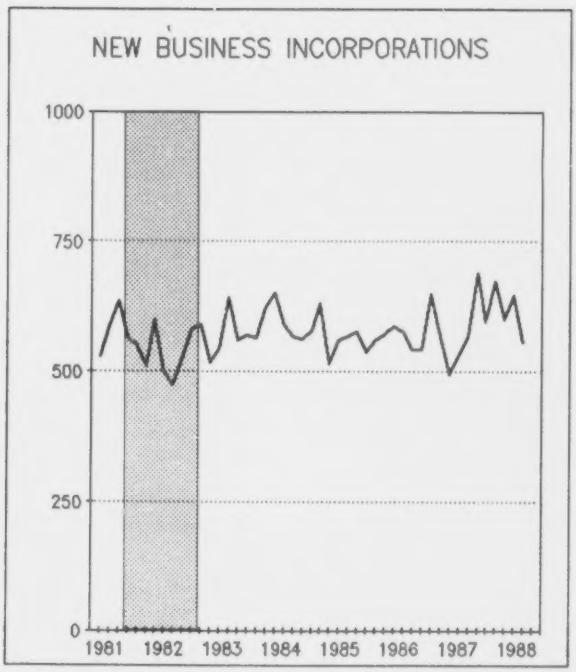

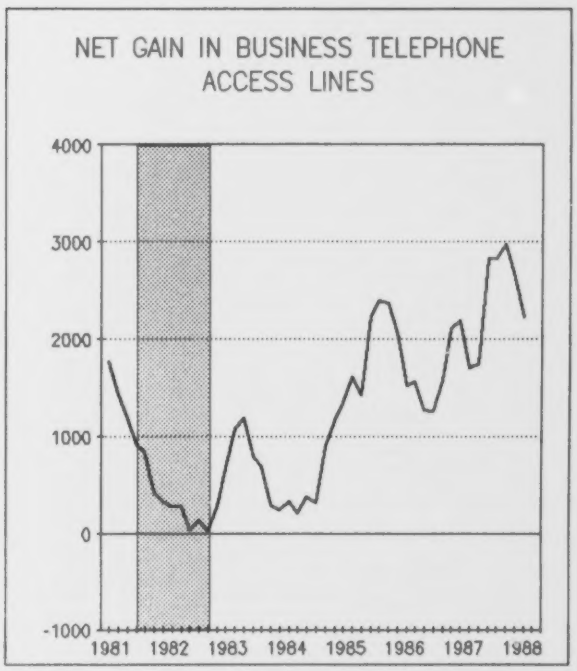

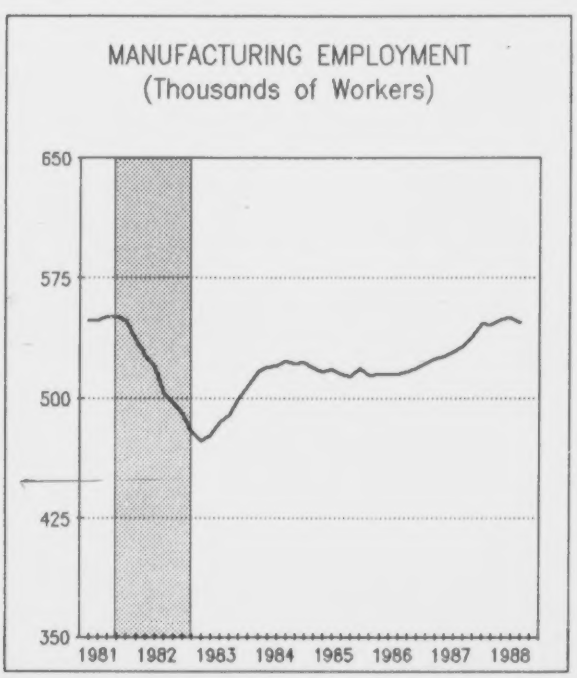

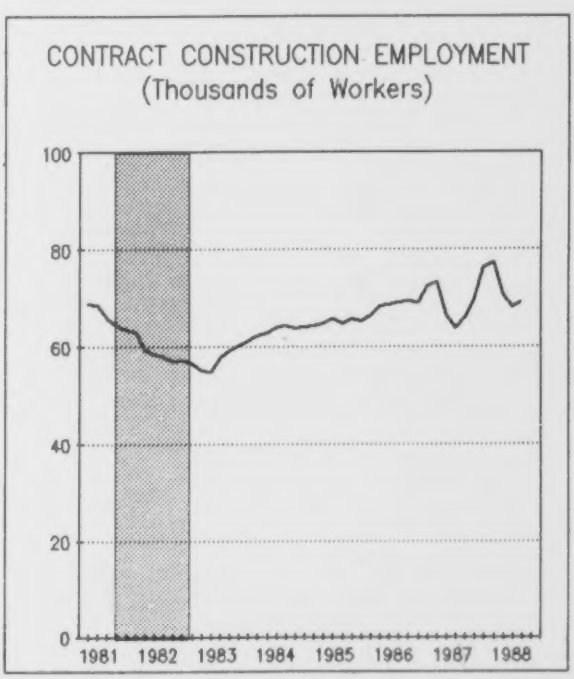

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(Continued from page 11)

state could suggest further changes and improvements. If the state suggestion did not reduce the statistical accuracy of the regression model, the Bureau of Labor Statistics approved the change. In the end, all of the 49 states agreed that the new method produced improved estimates.

You can judge for yourself, beginning with the release of the January 1989 estimates, how the new estimates fit with other information you may have concerning the economy, employment, and unemployment.